CLAIMS

1. A system for ventilating a room having walls (103), a floor (107) and a ceiling (105), and being capable of housing a patient's bed (140), comprising at least one air supply unit (120) and one air exhaust unit (130), **characterised** in that said air supply unit (120) comprises a guiding slot diffuser (122) for guiding an airstream in a certain direction, such that a patient (150), lying down in said bed on his back, receives said airstream, and that said exhaust unit (130) is arranged near the floor (107) and near a head end (141) of the bed (140) such that air is arranged to leave the room after having ventilated the patient (150), said air supply unit (120) also comprises an air outlet (305, 306) devised to supply air at a lower velocity but with a larger volume than the air passing through the diffuser (122), and in that said system also comprises at least one main diffuser (305, 306) comprising perforated sheet (305, 306) and arranged such that a first airflow through the slot diffuser (122) having a first velocity co-ejects a second airflow having a second velocity through the main diffuser (305, 306), said second velocity being lower than said first velocity, such that the combined flow assumes substantially the direction of the first flow, and in that the longitudinal direction of at least one slot (301, 302) in the diffuser (120) is lying in a plane which is parallel to a vertical plane parallel with a left or right side of the bed in which the patient is lying.

2. A system as recited in claim 1, **characterised** in that said guiding slot diffuser (122) is provided with a booster fan (124) for driving air through the diffuser (122).

3. An air supply unit (120) for providing conditioned air to a patient lying in a bed, **characterised** by a booster fan (124), arranged to force air through a guiding slot diffuser (122) for guiding an airstream in a certain direction, said diffuser having at least one slot (301, 302), and one area of perforated sheet (305), being arranged at an outlet side of said diffuser.

4. An air supply unit (120) as recited in claim 4, **characterised** in that said diffuser has two slots (301, 302) and areas of perforated sheet arranged in close proximity of the slots such that an airstream, comprising air passing through both the perforated sheet (305, 306) and the diffuser slots (301, 302), assumes a direction (D) as controlled by the direction of the diffuser slots.

5. An air supply unit (120) as recited in claim 5, **characterised** in that said

diffuser slots (301, 302) form an angle α to a base plane 160 of said supply unit (120) such that air is guided obliquely down towards the patient (150).

6. An air supply unit (120) as recited in claim 5, **characterised** in that said base plane 160 is arranged horizontal.

7. An air supply unit (120) as recited in claim 6, **characterised** in that said angle α is between 5 and 15 degrees.

8. An air supply unit (120) as recited in claim 7, **characterised** in that said diffuser slots (301, 302) are adjustable sideways to enable setting the direction D of the airstream.

9. An air supply unit (120) as recited in claim 3, where each slot has a length, a width and a depth (DT), **characterised** in that the depth (DT) is substantially larger than the width.

10. An air supply unit (120) as recited in claim 9, **characterised** in that the depth (DT) is ten to twenty times larger than the width.

11. An air supply unit (120) as recited in claim 10, **characterised** in that the width is approximately 2 mm.

12. An air supply unit (120) as recited in claim 9, having two slots (301, 302), **characterised** in that an angle (GAMMA) is formed between the depth axes (361, 362) of each slot (301, 302).

13. An air supply unit (120) as recited in claim 12, **characterised** in that the angle (GAMMA) between the depth axes (361, 362) is arranged to be adjustable.

14. An air supply unit (120) as recited in claim 12, **characterised** in that the angle (GAMMA) between the depth axes (361, 362) is arranged to be 10 degrees.

15. An air supply unit (120) as recited in claim 4, **characterised** in that it comprises light tubes and corresponding reflectors for providing adequate lighting to a bed area of the room.

16. A portable air conditioning unit (500), **characterised** in that said conditioning unit (500) comprises at least one main diffuser (520, 521) and at least one slot

diffuser (530) arranged such that a first airflow through the slot diffuser (530) having a first velocity co-ejects a second airflow through the at least one main diffuser (520, 521) having a second velocity lower than said first velocity.

17. A portable air conditioning unit (500) as recited in claim 16, **characterised** in that a combined airflow, being the result of said first and second airflow, assumes the direction of the airflow through the slot diffuser (530).

18. A portable air conditioning unit (500) as recited in claim 16, **characterised** in that said slot diffuser is arranged in a meeting corner (620) of said main diffusers.

19. A portable air conditioning unit (500) as recited in claim 18, **characterised** in that an angle β between two main diffusers is between 80 and 110 degrees.

20. A portable air conditioning unit (500) as recited in claim 16, **characterised** in that said unit (500) comprises a slot diffuser unit having two slots with an acute angle (GAMMA) between said slots' depth axes.

21. A portable air conditioning unit (500) as recited in claim 19, **characterised** in that each slot is provided with a depth substantially larger than its width.

22. A unit (500) as recited in claim 21, **characterised** in that said width of the slot is approximately 2 mm.

23. A method for supplying fresh air to a patient lying in a bed in a room comprising the following steps:
- providing a first, relatively fast flow of air, relatively small in volume;
- providing a second, relatively slow flow of air, relatively large in volume, and adjacent to the first flow of air such that said first flow of air co-ejects air from the second flow; and
- providing a low speed large volume suction for evacuating the supplied air.

24. A method as recited in claim 23, further comprising the steps of:
- providing the first flow of air by forcing air through at least one elongated slot parallel to a vertical plane parallel to said bed's left or right side; and
- providing the second flow of air by forcing air through a perforated sheet of metal or similar material having a hole content of approximately 30 %.

25. A method as recited in claim 24 further comprising the steps of
    - providing the first flow of air by forcing air through two elongated slots having converging axes of depth; and
    - providing the second flow of air with an air speed of less than 5 % of the air speed of the first flow and with a volume flow of more than double the volume flow of the first flow.